

**BEFORE THE DEPARTMENT OF  
NATURAL RESOURCES AND CONSERVATION  
OF THE STATE OF MONTANA**

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<b>APPLICATION TO CHANGE WATER RIGHT ) NO. 76F 30155050 BY KYLE, STEVE &amp; ) SUSAN GRAVELEY )</b>	<b>PRELIMINARY DETERMINATION TO GRANT CHANGE</b>
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On March 4, 2022, Kyle, Steve, and Susan Graveley (Applicant) submitted Application to Change Water Right No. 76F 30155050 to change Water Right Claim Nos. 76F 110716-00 and 76F 110722-00 to the Central Office of the Department of Natural Resources and Conservation (Department or DNRC). On April 1, 2022, the application was sent to the Billings regional Office for processing. The Department published receipt of the Application on its website. The Application was determined to be correct and complete as of August 25, 2022.

An Environmental Assessment for this Application was completed on August 25, 2022.

**INFORMATION**

The Department considered the following information submitted by the Applicant, which is contained in the administrative record.

**Application as filed:**

- Application to Change Water Right, Form 606-IR
- Attachments
- Maps: 1967 USDA Aerial 1-76 GS-VBRR showing Graveley property and the historical place of use.  
Aerial 2013 ortho-1-1-1n-s-mt077-2013-1 showing proposed place of use.  
1979 USDA Aerial rpw178-055 showing historical point of diversion, conveyance, and place of use.  
1953 Aerial DTW 10-091 showing historical ditches.
- Affidavit from Julie Merritt, Consultant, dated October 29, 2020, regarding historical irrigation patterns in the Blackfoot River Basin.
- Affidavit from Charles Beck, former Leasee, dated June 28, 2007, regarding irrigated acreage.
- Affidavit from Emmett Coughlin, Helmville Native, dated September 27, 1992, regarding irrigation and ditches in Section 3, T13N, R11W.

- Affidavit from Robert Wilson, former Owner, dated September 18, 2013, regarding efforts to maintain the McCormick-Coughlin Ditch to utilize his water rights.
- Pivot specifications from Aqua Tech Inc., Belgrade, MT.
- Place of Use Amendment for Statement of Claim 76F 110719-00 reducing acres.
- Request to Withdraw Statement of Claim 76F 110720-00
- Closing Order signed by Russ McElyea, Chief Water Judge, dated February 11, 2021, accepting the withdrawal of 76F 110720-00 and amendment of 76F 110719-00.
- Pump curves for the pumps proposed as means of diversion.
- Letter from Kathleen Coughlin, Resident, to Mr. King, Highway Construction Supervisor, dated October 3, 1956, regarding culvert work for the ditch.
- Letter from Scott Hart, State Highway Engineer, to Kathleen Coughlin, Resident, dated October 5, 1956, regarding the same culvert.
- Unsigned letter to Johnnie Jacobson, dated October 18, 1956, regarding cleaning the ditch.
- Letter from Robert Wilson, former Owner, to Ted Mizner, Attorney, dated June 26, 1977, discussing issues with the neighbors and Mr. Wilson's attempt to utilize his water rights.

#### Information Received after Application Filed

- E-mail dated May 13, 2022, from Julie Merritt, Consultant, to Mark Elison, Regional Manager, requesting 8% irrecoverable loss for the proposed pivot irrigation and clarifying proposed place of use.
- E-mail dated May 18, 2022, from Julie Merritt, Consultant, to Mark Elison, Regional Manager, detailing the pivot sprinkler specifications.
- Letter agreeing to the condition proposed by the Department, signed by Kyle Graveley, and dated August 31, 2022.

#### Information within the Department's Possession/Knowledge

- Water Resources Survey
- USGS StreamStats application <https://streamstats.usgs.gov/ss/>
- USGS Gage 12337800 Nevada Creek at Mouth near Helmville, MT.
- Settlement Stipulation in Case 76F-14 Water Court of the State of Montana Clark Fork Division.

- Department water right records
- File for 1979 Change Application 76F 30004850 to change Statement of Claim 76F 110722-00
- USGS gage 12340000, Blackfoot River near Bonner
- Technical Report for Change Application 76F 30155050 by Mark Elison, Regional Manager.
- The Department also routinely considers the following information. The following information is not included in the administrative file for this Application but is available upon request. Please contact the Billings Regional Office at 406-247-4415 to request copies of the following documents.
  - Return Flow Memo, dated 4/1/2016
  - Consumptive Use Methodology Memo, dated 3/17/2010
  - Historical Diverted Volume Memo, dated 9/13/2012
  - Distributing Conveyance Losses on Multiple User Ditches Memo, dated 2/14/2020

The Department has fully reviewed and considered the evidence and argument submitted in this Application and preliminarily determines the following pursuant to the Montana Water Use Act (Title 85, chapter 2, part 3, part 4, MCA). **NOTE:** Department or DNRC means the Department of Natural Resources & Conservation; CFS means cubic feet per second; GPM means gallons per minute; AF means acre-feet; AC means acres; AF/YR means acre-feet per year; POU means place of use and POD means point of diversion.

## **WATER RIGHTS TO BE CHANGED**

### **FINDINGS OF FACT**

1. Applicant seeks to change Water Right Claims 76F 110716-00 and 76F 110722-00. Statement of Claim 76F 110716-00 is for 22.73 CFS flow rate from the Blackfoot River for irrigation on 600 AC with a priority date of April 28, 1919. The period of diversion and period of use are May 1 to October 1. The point of diversion is NWSWSE Section 25, T14N, R11W, Powell County. The place of use is the same for both 76F 110716-00 and 76F 110722-00:

16.00 AC      SWSW Section 2, T13N, R11W  
 205.00 AC    S2      Section 3, T13N, R11W

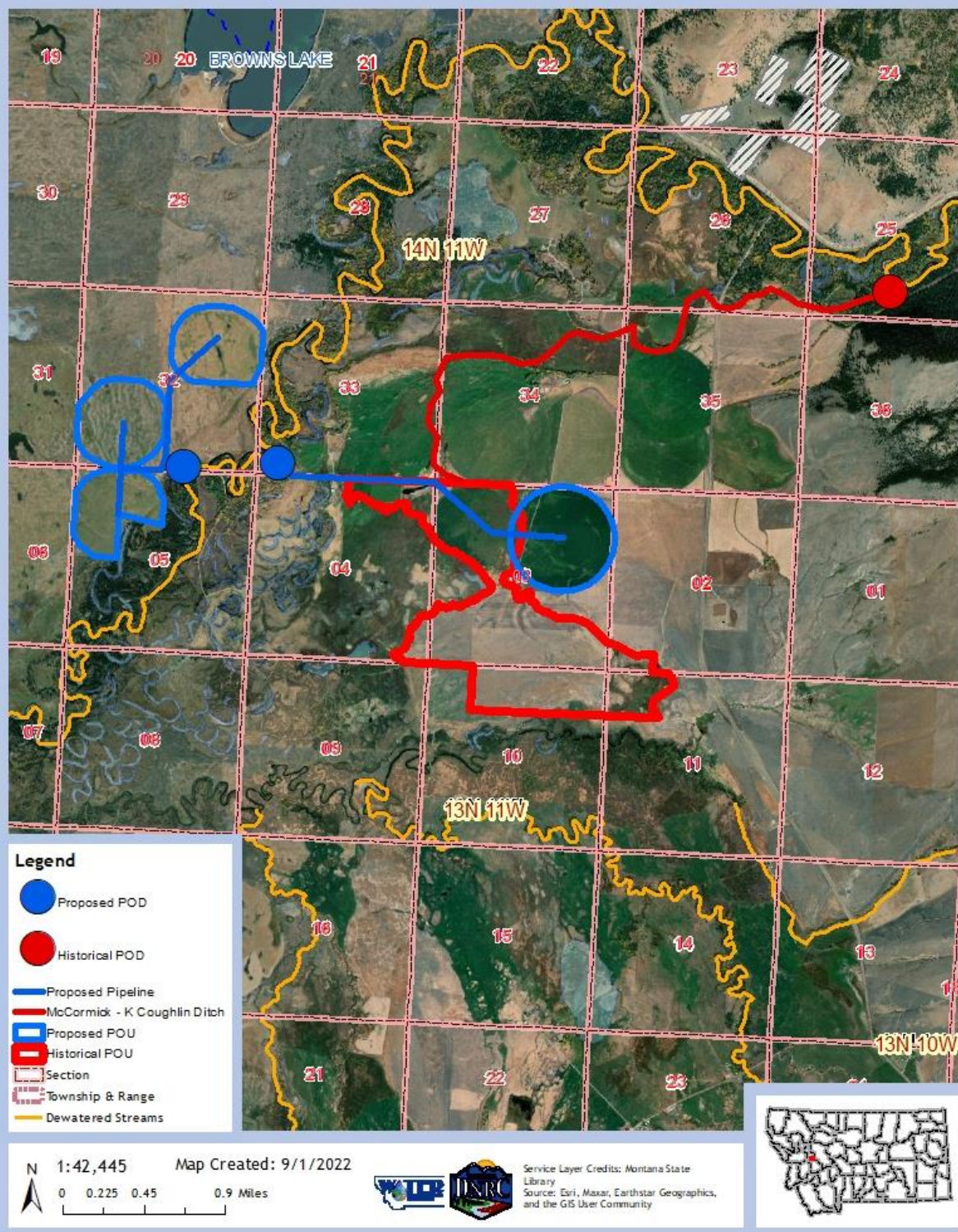
136.00 AC NW Section 3, T13N, R11W  
5.00 AC NWNE Section 3, T13N, R11W  
49.00 AC NE Section 4, T13N, R11W  
20.00 AC E2SE Section 4, T13N, R11W  
120.00 AC N2N2 Section 10, T13N, R11W  
49.00 AC N2NW Section 11, T13N, R11W, all in Powell County

2. A change authorization was issued for Statement of Claim 76F 110722-00 on February 27, 1979. Objections to Statements of Claim 76F 110716-00 and 76F 110722-00 were the subject of Montana Water Case 76F-14. The Master's Report adopted by Chief Water Judge, Russ McElyea, on May 27, 2015, and based upon a settlement stipulation between the parties, made substantive changes to both water rights including reducing irrigated acres, reducing the flow rate, and finding that they were supplemental. Because the change authorization was issued prior to the Montana Water Court making changes to Statement of Claim 76F 110722-00 and finding it supplemental to Statement of Claim 76F 110716-00, the 1979 change authorization on Statement of Claim 76F 110722-00 did not account for the reduced flow rate and supplemental nature of the two rights. The change in point of diversion and place of use granted under the 1979 change authorization are re-evaluated and incorporated into this change application. The new point of diversion and some of the place of use authorized in the 1979 change have been in use. Statement of Claim 76F 110722-00 is described here as it occurs on the post-decree version after Montana Water Court changes and without the 1979 change. The stipulation agreement also included a statement that these water rights are subject to an agreement to discontinue use on land not located in the NE or SW Section 32, T14N, R11W or NW Section 5, T13N R11W when flows in the Blackfoot River are at or below 700 CFS as measured at or near Bonner, MT. Statement of Claim 76F 110722-00 is for 22.73 CFS flow rate from the Blackfoot River with a priority date of June 25, 1896. The point of diversion, place of use (FOF 1), and period of diversion and use are identical to Statement of Claim 76F 110716-00. Both water rights use the McCormick-K Coughlin Ditch as conveyance to the place of use. The place of use is approximately 10 miles southeast of Ovando.

**Table 1: Water Rights Proposed for Change**

WATER RIGHT NUMBER	FLOW	VOLUME	PURPOSE	PERIOD OF USE	PLACE OF USE	POINT OF DIVERSION	PRIORITY DATE
76F 110716-00	22.73 CFS	Historical and Beneficial Use	Irrigation (600 AC)	5/1 to 10/1	See detail above (FOF 1)	NWSWSE Section 25, T14N, R11W, Powell Co.	4/28/1919
76F 110722-00	22.73 CFS	Historical and Beneficial use	Irrigation (600 AC)	5/1 to 10/1	See detail above (FOF 1)	NWSWSE Section 25, T14N, R11W, Powell Co.	6/25/1896

# 76F 30155050 Graveley





3. Statements of Claim 76F 110716-00 and 76F 110722-00 were considered supplemental to one another and to Statements of Claim 76F 110718-00, 76F 110719-00, and 76F 110720-00. The reduction in irrigated acres for Statements of Claim 76F 110716-00 and 76F 110722-00 by the Montana Water Court eliminated the supplemental relationship with 76F 110718-00. The Applicant has amended 76F 110719-00 and withdrawn 76F 110720-00. Both the amendment and the withdrawal have been accepted by the Montana Water Court. There are currently no other supplemental water rights. Provisional Permit 76F 92754-00 with a priority date of January 9, 1995, is associated with 76F 110716-00 because they have overlapping places of use. These two water rights were never used at the same time because the ditch used as conveyance for 76F 110716-00 was unavailable to the owners. These water rights would not be associated if this change application is granted because the places of use would no longer overlap.

## **CHANGE PROPOSAL**

### **FINDINGS OF FACT**

4. The Applicant proposes to change the point of diversion to two pumps in the Blackfoot River in SWSWSE Section 32, T14N, R11W, and SWSWSW Section 33, T14N, R11W, both in Powell County. The new points of diversion are 12.4 and 13.3 miles downstream of the historical point of diversion on the Blackfoot River. The Applicant proposes to change the place of use to four center pivot sprinkler systems covering 498.00 AC: 101.00 AC in NW Section 5 and 150.00 AC in Section 3, T13N, R11W, 114.00 AC in NE and 133.00 AC in SW Section 32, T14N, R11W, all in Powell County. The Applicant proposes to cease irrigation on the 600 AC within the historic place of use and retire the original point of diversion and the associated ditch system.

5. There is no proposed change in purpose or pattern of use. The new use will not be comingled with any other water rights. Three of the new center pivot sprinkler systems are approximately 1.5 miles to the northwest across the Blackfoot River. The fourth center pivot sprinkler system is immediately east of the original place of use.

6. Water right claims 76F 110716-00 and 76F 110722-00 are subject to an agreement to discontinue diversion and use of the claims on land that is not located in the NE or SW, Section 32, T14N, R11W or NW Section 5, T13N, R11W when flows in the Blackfoot River are at or below 700 CFS as measured at or near Bonner, MT.

## **CHANGE CRITERIA**

7. The Department is authorized to approve a change if the applicant meets its burden to prove the applicable § 85-2-402, MCA, criteria by a preponderance of the evidence. Matter of Royston, 249 Mont. 425, 429, 816 P.2d 1054, 1057 (1991); Hohenlohe v. DNRC, 2010 MT 203, ¶¶ 33, 35, and 75, 357 Mont. 438, 240 P.3d 628 (an applicant's burden to prove change criteria by a preponderance of evidence is "more probably than not."); Town of Manhattan v. DNRC, 2012 MT 81, ¶8, 364 Mont. 450, 276 P.3d 920. Under this Preliminary Determination, the relevant change criteria in §85-2-402(2), MCA, are:

(2) Except as provided in subsections (4) through (6), (15), (16), and (18) and, if applicable, subject to subsection (17), the department shall approve a change in appropriation right if the appropriator proves by a preponderance of evidence that the following criteria are met:

(a) The proposed change in appropriation right will not adversely affect the use of the existing water rights of other persons or other perfected or planned uses or developments for which a permit or certificate has been issued or for which a state water reservation has been issued under part 3.

(b) The proposed means of diversion, construction, and operation of the appropriation works are adequate, except for: (i) a change in appropriation right for instream flow pursuant to 85-2-320 or 85-2-436; (ii) a temporary change in appropriation right for instream flow pursuant to 85-2-408; or (iii) a change in appropriation right pursuant to 85-2-420 for mitigation or marketing for mitigation.

(c) The proposed use of water is a beneficial use.

(d) The applicant has a possessory interest, or the written consent of the person with the possessory interest, in the property where the water is to be put to beneficial use or, if the proposed change involves a point of diversion, conveyance, or place of use on national forest system lands, the applicant has any written special use authorization required by federal law to occupy, use, or traverse national forest system lands for the purpose of diversion, impoundment, storage, transportation, withdrawal, use, or distribution of water. This subsection (2)(d) does not apply to: (i) a change in appropriation right for instream flow pursuant to 85-2-320 or 85-2-436; (ii) a temporary change in appropriation right for instream flow pursuant to 85-2-408; or (iii) a change in appropriation right pursuant to 85-2-420 for mitigation or marketing for mitigation.

8. The evaluation of a proposed change in appropriation does not adjudicate the underlying right(s). The Department's change process only addresses the water right holder's ability to make a different use of that existing right. E.g., Hohenlohe, at ¶¶ 29-31; Town of Manhattan, at ¶8; *In the Matter of Application to Change Appropriation Water Right No.41F-31227 by T-L Irrigation*



## **HISTORIC USE AND ADVERSE EFFECT**

### **FINDINGS OF FACT - Historic Use**

9. The two water rights proposed for change are entirely supplemental. The two water rights share the 22.73 CFS flow rate and the water rights are considered to have contributed equally to the historical irrigation. The historical use of the water rights is considered together and divided into equal parts below.

10. The 1959 Water Resource Survey for Powell County does not show any irrigated acres in W2 Section 2, N2 Section 10, N2 Section 11, or Sections 3 & 4, T13N, R11W. However, the McCormick – K Coughlin Ditch is mapped to the claimed place of use. The Water Resource Survey notes indicate that neither the owner nor the leasee was asked about the place of use and information was obtained from a third party. The June 27, 1953, aerial photograph DTW 10-91, clearly indicates irrigation on the claimed place of use.

11. The leasee at the time of the Water Resource Survey, Charles Beck, swore an affidavit on June 28, 2007, stating that between 1939 and 1973 he actively irrigated the entirety of the current place of use. Specifically, he irrigated all of section 3 and portions of sections 2, 4, and 10, T13N, R11W, Powell County.

12. Emmett Coughlin, son of David Coughlin who worked the ranch in the 1930s, in an affidavit dated September 27, 1992, swears to memory of irrigation for hay and alfalfa in Sections 2, 3, 4, 10, and 11, T13N, R11W, and to the ditches having been in place prior to 1930.

13. Three letters to and from Kathleen Coughlin in the fall of 1956 refer to maintenance of the ditch demonstrating that the ditch was present at that time.

14. The Settlement Stipulation in Montana Water Court Case 76F-14 states that the Claimant (Graveley's) and Objectors (Montana Fish, Wildlife and Parks, Avista Corporation, U.S. Bureau of Land Management, U.S. Fish and Wildlife Service) conducted site visits to investigate the historical use of water rights 76F 110716-00 and 76F 110722-00 and that the site visit findings were consistent with the terms of the stipulation that lists 600 irrigated acres.

15. Based on the affidavits, presence of ditches, the settlement stipulation and what evidence is available from 1953 aerial photographs, the Department finds that 600 AC were historically irrigated.

16. The original filed claims for water rights 76F 110716-00 and 76F 110722-00 claimed a flow rate of 2,500 miner's inches (62.5 CFS). That flow rate has been reduced by examination and water court action to the adjudication standard of 17 GPM/AC on 600 AC or 22.73 CFS.

17. Robert Wilson, a previous owner, measured the ditch in 1977. The ditch was 4 feet wide at the top, 3 feet wide at the bottom and 2.6 feet deep. Assuming 4 inches of freeboard to prevent overtopping, the water depth is estimated to be 2.2 feet. A trapezoidal ditch with the above dimensions has a cross-sectional flow area of 7.7 ft<sup>2</sup> and a wetted perimeter of 7.5 ft. Manning's equation using these measurements, a Manning's Coefficient of 0.02 and a slope from USGS topographic maps of 0.0026 ft/ft, gives a capacity of 29.97 CFS ( $1.49/0.02 \times 7.7 \times (7.7/7.5)^{2/3} \times 0.0026^{0.5} = 29.97$ ).

18. When Mr. Wilson measured the ditch, a float method gave a velocity of 1.5 ft/sec. Given the cross-sectional flow area above, the flow in the ditch was 11.55 CFS ( $7.7 \times 1.5 = 11.55$ ). The float area method for determining flow rate is subject to substantial errors if not done correctly. Neither the location nor the specifics of the measurement are known. Therefore, the Department finds this measurement of ditch capacity lacks credibility.

19. Based on the claimed flow rates and the Department's calculated capacity of the ditch, the Department finds the historical diverted flow rate was 22.73 CFS. The combined flow rate of the two water rights proposed for change shall not exceed 22.73 CFS.

20. The period of diversion and period of use for 76F 110722-00 and 76F 110716-00 as claimed and decreed are May 1 through October 1. This period of diversion is within Department standards for irrigation in climatic region V. The Department finds that the historical period of diversion and period of use of these water rights was May 1 to October 1 of each year.

21. The Applicant has chosen to proceed with the Department's historical use rules under ARM 36.12.1902.

22. Using the Ovando, MT weather station, the Irrigation Water Requirement (IWR) for 600 AC of flood irrigation is 614 AF ( $600 \text{ AC} \times 12.28 \text{ inches}/12 = 614$ ). The consumptive use not including irrecoverable losses is the IWR value for 600 acres times the management factor for Powell County of 77.6 % which equates to 476.5 AF ( $614 \times .776 = 476.5$ ). To calculate total consumptive volume, the Department adds 5% of the field applied volume in flood irrigation systems to account for irrecoverable losses. Using 55% efficiency for contour ditches, the field

applied volume is 866.4 AF ( $476.5/0.55 = 866.4$ ), and the irrecoverable losses are 43.32 AF ( $866.4 \times .05 = 43.32$ ). Total historical consumptive volume is 519.8 AF ( $476.5 + 43.32 = 519.8$ ). The historical consumptive volume is 0.87 AF/AC, and the historical field applied volume is 1.44 AF/AC. The water rights proposed for change are entirely supplemental and the Department finds that the historical consumptive use was evenly split between the two water rights.

23. The total historical diverted volume is 1,530.84 AF. The Department uses the following formula, found in ARM 36.12.1902 (10), to determine historic diverted volume:  $\text{Historic Diverted Volume} = (\text{Volume}_{\text{historic consumptive use}} / \text{On-farm efficiency}) + \text{Volume}_{\text{conveyance loss}}$ . The historic consumptive use, not including irrecoverable losses is 476.5 AF. Using a flood irrigation efficiency of 55%, the field applied volume is 866.4 AF. Conveyance loss is defined as the portion of water diverted at the headgate that does not arrive at the irrigated place of use due to seepage and evapotranspiration from the ditch. In this case, there are several water rights using the same diversion and conveyance facilities. All water rights except the two proposed for change in this application are diverted from the ditch at the same secondary point of diversion. The Department broke the main ditch down into two segments based on the locations where the other water rights are taken out of the ditch. The segment from the headgate to the point where other water rights are removed from the ditch is approximately 3,700 feet long and the remainder of the ditch to the first irrigated field is approximately 16,500 feet. The Applicant's flow rate was then divided by total flow in the ditch for each segment to determine their percent of flow in each segment. The Applicant has 36.8% of the claimed flow in the first segment and 100% of the flow in the remaining segment. These percentages are applied to the conveyance losses for each segment to determine the Applicants' portion.

24. The conveyance loss is broken down into three parts: seepage loss, vegetative loss, and evaporation loss. Each is covered individually below.

25. Seepage loss is calculated as:  $(\text{wetted perimeter})(\text{ditch length})(\text{loss rate})(\text{days})/43,560 \text{ ft}^2/\text{acre}$ . For the McCormick – K Coughlin ditch up to the Applicants' fields, seepage loss is 589.17 AF where the main ditch is 4 ft. wide at the top, 3 ft wide at the bottom and the water is 2.2 ft deep. The length of the ditch is 20,200 feet, the loss rate of 1.4 is based on sandy loam soils, and the Applicant provided the number of days the ditch is running as 121. The Applicants' portion of the seepage loss is 520.97 AF which is the sum of the losses for each segment based on the Applicants' percent of flow in each segment.

26. Vegetation loss is calculated as:  $(\% \text{ loss per mile})(\text{flow in CFS})(\text{days ditch is flowing})(\text{ditch length in miles})^2$ . For the McCormick – K Coughlin ditch, up to the Applicants' fields, vegetation loss is 158.0 AF where percent loss per mile is a constant 0.0075, historical flow rate is taken as 22.73 CFS, 121 days the ditch is on, 3.83-mile length and the unit conversion constant 2 is the number of AF/Day/CFS rounded up from 1.98. The Applicants' portion of the vegetation loss is 138.24 AF which is the sum of the losses for each segment based on the Applicants' percent of flow in each segment.

27. Ditch evaporation is calculated as  $(\text{surface area of ditch (length*width in ft.)})(\text{evaporation rate in ft./acre/yr., period adjusted})/43,560 \text{ ft}^2/\text{acre}$ . For the McCormick – K Coughlin ditch, up to the Applicants' fields, the ditch evaporation is 5.92 AF where the main ditch is 4 ft. wide, 20,200 ft. long and evaporation from Potts adjusted to 75% of Penman-Linacre at the Seeley Lake station (#7448) from April to October is 3.19 feet. The Applicants' portion of evaporation losses is 5.23 AF which is the sum of the losses for each segment based on the Applicants' percent of flow in each segment.

28. The Applicants' portion of conveyance losses total 664.44 AF  $(520.97 + 138.24 + 5.23 = 664.44)$  with an applied volume of 866.4 AF, the total historic diverted volume for both rights is 1,530.84 AF  $(866.4 + 664.44 = 1530.84)$ . Historic diverted volume is 2.55 AF/AC.

29. The two water rights proposed for change are entirely supplemental. There is no evidence that the source was ever the subject of a call, and no water commissioner has been appointed. The two water rights share the 22.73 CFS flow rate and the water rights are considered to have contributed equally to the historical irrigation. No other water rights are supplemental to the water rights proposed for change. The Applicant has withdrawn water right 76F 110720-00 and reduced the acres water right 76F 110719-00 to remove the supplemental nature of these rights.

30. Statements of Claim 76F 110716-00 and 76F 110722-00 have not been used on the historical place of use since the late 1970s. Statement of Claim 76F 110722-00 has been used as authorized under the 1979 change.

31. Mr. Robert Wilson, nephew of Kate Coughlin, acquired the property in 1973 or 1974. His affidavit, dated September 18, 2013, attests that he attempted to maintain the McCormick – K Coughlin Ditch and that his efforts were thwarted by his neighbor who threatened bodily harm. His letter to attorney, Ted Mizner, dated June 26, 1977, details Mr. Wilson's effort to maintain his ditch and use his water right to avoid losing the water right.

32. As part of his attempt to use his water right, Mr. Wilson initiated the change process to move water right 76F 110722-00 to a location where he had control over access to the water. The 1979 change authorization allowed the water to be moved from the historical place of use to Section 32, T14N, R11W and Section 5, T13N, R11W. That place of use is proposed as part of the current application.

33. The Department finds the following historic use.

**Table 2: Historical Use of Water Rights Proposed for Change**

WR Claim #	Priority Date	Diverted Volume	Flow Rate	Purpose (Total Acres)	Consump. Use	Place of Use	Point of Diversion
76F 110716-00	4/28/1919	765.42 AF	22.73 CFS (shared)	Irrigation 600 acres (supplemental)	259.9 AF	SWSW Section 2, S2, NW & NWNE Section 3, NE & E2SE Section 4, N2N2 Section 10, N2NW Section 11, T13N, T11W	NWSWSE Section 25, T14N, R11W
76F 110722-00	6/25/1896	765.42 AF	22.73 CFS (shared)	Irrigation 600 acres, (Supplemental)	259.9 AF	SWSW Section 2, S2, NW & NWNE Section 3, NE & E2SE Section 4, N2N2 Section 10, N2NW Section 11, T13N, T11W	NWSWSE Section 25, T14N, R11W, Powell County

**FINDINGS OF FACT – Adverse Effect**

34. The Applicant can and will cease diversion from the Blackfoot River if call is made.

35. The Applicant proposes to change the point of diversion from a headgate in NWSWSE Section 25, T14N, R11W, to two pumps in the Blackfoot River in SWSWSW Section 33 and SWSWSE Section 32, T14N, R11W. The Applicant proposes to change the place of use from 600.00 AC in Sections 2, 3, 4, 10, and 11, T13N, R11W, to four center pivot sprinkler systems. The center pivot sprinkler systems are 114.00 AC in NE and 133.00 AC in SW Section 32, T14N, R11W, 150.00 AC in NE Section 3, T13N, R11W and 101.00 AC in NW Section 5, T13N, R11W. Total irrigated acres proposed are 498.00 AC. The new points of diversion are 12.4 and 13.3 miles downstream of the historical point of diversion on the Blackfoot River. There are 29 water rights on the Blackfoot River between the historical point of diversion and the proposed points of diversion (see Technical Report). These water rights would see no change to the source because the water rights being changed have not been used in nearly fifty years. Water rights downstream

of the proposed points of diversion would see an increase in flow in the Blackfoot River compared to the historical use. Although the water rights have not been used for many years, the Applicants could have resumed diversion at the original POD at any time.

36. There are 20 water rights upstream of the proposed PODs that would be subject to call that were not historically subject to call. These are the water rights between the historical and proposed points of diversion not including the nine water rights that are diverted at the McCormick-K. Coughlin Ditch. These water rights will not be adversely affected because the POD in SWSWSE Section 32, T14N, R11W, has been operating since the 1979 change authorization and because the new pivot using that POD and the new POD are subject to the agreement and condition to cease diversion when the gage on the Blackfoot River near Bonner falls below 700 CFS. The Department will add the following condition agreed to by the Applicant on August 31, 2022.

**IMPORTANT INFORMATION:**

THE APPROPRIATOR WILL CEASE DIVERSION AND USE OF WATER FOR IRRIGATION ON 150 AC IN SECTION 3, T13N, R11W AND 114 AC IN NE SECTION 32, T14N, R11W, WHEN FLOW IN THE BLACKFOOT RIVER MEASURED NEAR BONNER, MT FALLS BELOW 700 CFS.

37. The proposed flow rate is 10.53 CFS. The pump in SWSWSE Section 32 that provides water to the pivots on the west side of the river can provide 2,850 GPM (6.35 CFS) at 75% efficiency. The pump at the new POD in SWSWSW Section 33, T14N, R11W can produce 1,875 GPM (4.18 CFS) at 75% efficiency. The total maximum proposed flow rate is 4,725 GPM or 10.53 CFS. The proposed flow rate is 12.2 CFS less than the historical flow rate. ( $22.73 \text{ CFS} - 10.53 \text{ CFS} = 12.23 \text{ CFS}$ )

38. The Applicant proposes full-service irrigation on 133 AC in SW Section 32, T14N, R11W and 101 AC in NW Section 5, T13N, R11W. These are the acres irrigated under the 1979 change authorization and not subject to flow conditions on the Blackfoot River. Using the Ovando, MT weather station, the Irrigation Water Requirement (IWR) for 234 AC of center pivot irrigation is 281.4 AF ( $234 \times 14.43/12 = 281.4 \text{ AF}$ ). The consumptive use not including irrecoverable losses is the IWR value times the management factor for Powell County of 100%, or 281.4 AF. Given 80% efficiency for center pivot irrigation the applied volume for these acres is 351.8 AF ( $281.4/.8$

= 351.8). There are no conveyance losses because all water is conveyed in pipes and the proposed diverted volume for the area of full-service irrigation is 351.8 AF.

39. The Applicant proposes partial service irrigation on 150.0 AC in Section 3, T13N, R11W and 114.0 AC in NE Section 32, T14N, R11W. These are the new irrigated acres subject to flow conditions on the Blackfoot River. Using the Ovando weather station, the Irrigation Water Requirement (IWR) for 264.0 AC of center pivot irrigation is 317.5 AF ( $264 \times 14.43/12 = 317.5$  AF). The consumptive use not including irrecoverable losses is the IWR value times the management factor for Powell County of 100%, or 317.5 AF. The Applicant would only be allowed to irrigate these acres for approximately 60% of the period of diversion given the condition to cease diversion when the gage near Bonner falls below 700 CFS. The flow in the Blackfoot River typically falls below 700 CFS in late July or early August based on the last 22 years of record. The proposed consumptive use (not including irrecoverable losses) for the partial service irrigation is 190.5 AF ( $317.5 \text{ AF} \times .6 = 190.5 \text{ AF}$ ). Given 80% efficiency, the applied volume for these acres would be 238.1 AF ( $190.5/.8 = 238.1$ ). There are no conveyance losses because all water is conveyed in pipes and the proposed diverted volume for the area of partial service irrigation is 238.1 AF.

40. The Department typically adds 10% of the applied volume to the consumptive volume to account for irrecoverable losses, primarily evaporation. The center pivot irrigation systems are equipped with low pressure, low drift sprinkler heads on drop hoses. The April 15, 2013, Department memo titled *Assessment of new consumptive use and irrecoverable losses associated with change applications*, estimated maximum evaporative losses of 5% in western Montana given low pressure, drop tube delivery systems. For this Application, the Department is using 8% irrecoverable losses as proposed by the Applicant and deemed credible by the Department. For the full-service acres, the irrecoverable losses are 28.1 AF ( $351.8 \times 0.8 = 28.1$ ) and the irrecoverable losses for the partial service acres are 19.0 AF ( $238.1 \times .08 = 19.0$ ).

41. Total proposed consumptive volume is 519.0 AF, the sum of consumptive volume for the full-service acres, the partial service acres, and the irrecoverable losses for both ( $281.4 + 190.5 + 28.1 + 19.0 = 519.0$  AF). Proposed consumptive use is 0.8 AF less than historical consumptive use ( $519.8 - 519.0 = 0.8$ ).

42. Proposed diverted volume is  $351.8 \text{ AF} + 238.1 \text{ AF} = 589.9 \text{ AF}$ . Proposed diverted volume is 940.94 AF less than the historical diverted volume. ( $1,530.84 - 589.9 = 940.94$ )



43. The Blackfoot River and Nevada Creek are considered hydraulically connected surface waters. Nevada Creek received return flows below Section 11, T13N, R11W and the Blackfoot River received return flows below Section 33, T14N, R11W. Nevada Creek in this reach runs through a wetland area that contains multiple small channels connected to Nevada Creek including Spring Creek. All the interconnected channels are considered part of Nevada Creek for the purposes of return flow analysis.

44. The Return Flow Report, by Jake Mohrmann, Department Hydrologist, dated August 23, 2022, estimates that 173.30 AF returned to Nevada Creek annually, relatively evenly distributed by month (between 14.10 AF and 14.72 AF/Month). Return flow to the Blackfoot River is estimated at 173.30 AF, also relatively evenly distributed by month (between 14.11 AF and 14.71 AF/Month).

45. Return flows to Nevada Creek under proposed use would be 0.84 or 0.85 AF/Month for an annual return flow of 10.13 AF. Return flows to the Blackfoot River under proposed use would be 60.77 AF annually ranging from 8.97 AF in November to 3.25 AF in August. Net decrease in annual return flows based on historical irrigation total 112.53 AF for the Blackfoot River and 163.17 AF for Nevada Creek.

46. Return flow from historical irrigation would accrue to the Blackfoot River and Nevada Creek spread out evenly over the year due to relatively great distances of the sources from the fields. In the time since the 1979 change authorization, return flows would have been partially shifted to the Blackfoot River where most return flow will occur in the proposed irrigation. Water will be left instream in the Blackfoot River relative to the historical diversion and return flows from proposed use will return to the Blackfoot River in the same area as they did historically. Based on the difference between proposed and historically diverted volume, 940.94 AF of water (FOF 42) would be left in the Blackfoot River, much more than the modeled 112.53 AF decrease in return flows.

47. The USGS operated a stream gage near the mouth of Nevada Creek (USGS Gage 12337800, Nevada Creek at mouth near Helmville, MT.) from October 2001 to September 2008. To determine the physical availability of water at the top of the depleted reach on Nevada Creek, the Department added the legal demands between the gage and the top of the depleted reach to the median of the mean monthly flow at the gage. All the legal demands in the table below are between the gage and the top of the depleted reach except 76F 30129730 which is downstream of the USGS gage. There are two instream flow water rights for wildlife (76F 98113-00 and 76F

98114-00) that were not added because they are never diverted. Livestock direct from source water rights for which no flow or volume are recorded were each assigned 35 GPM flow rate and 0.034 AF/AU (30 gallons per day per animal unit). Irrigation water rights with no assigned volume were assigned 1.96 AF/AC which is the Department standard for 45% efficient flood irrigation in climatic region V. This is a conservative assignment of volume because the AF/AC is high. The legal demands from the top of the depleted reach (Section 11, T13N, R11W) to the confluence with the Blackfoot River were then subtracted from the physically available water at the top of the depleted reach. The water rights between the top of the depleted reach and the confluence with the Blackfoot River are listed in the table below.

**Table 3. Water Rights Between the Top of the Depleted Reach of Nevada Creek and the Confluence With the Blackfoot River.**

WATER RIGHT NUMBER	OWNERS	PURPOSES	FLOW RATE (GPM)	FLOW RATE (CFS)	ACRES	VOLUME	ANIMAL UNITS
76F 30130762	BIGNELL RANCH CO	STOCK	35.00	0.08	0.00	12.10	300.0
76F 30129730	BLACKFOOT RIVER RANCH INC	STOCK	35.00	0.08	0.00	25.02	736.0
76F 30144537	MONTANA, STATE OF DEPT OF FISH WILDLIFE & PARKS	STOCK	1.65	0.0037	0.00	1.34	79.0
76F 98100 00	MONTANA, STATE OF DEPT OF FISH WILDLIFE & PARKS	STOCK	35.00	0.08	0.00	13.76	404.6
76F 98111 00	MONTANA, STATE OF DEPT OF FISH WILDLIFE & PARKS	STOCK	35.00	0.08	0.00	13.75	404.5
76F 98112 00	MONTANA, STATE OF DEPT OF FISH WILDLIFE & PARKS	STOCK	35.00	0.08	0.00	13.75	404.5

76F 98122 00	MONTANA, STATE OF DEPT OF FISH WILDLIFE & PARKS	IRRIGATION	3141.60	7.00	480.00	940.80	0.0
76F 98123 00	MONTANA, STATE OF DEPT OF FISH WILDLIFE & PARKS	IRRIGATION	5610.00	12.50	480.00	940.80	0.0
76F 98105 00	NEVADA SPRING CREEK PARTNERS LLC	STOCK	35.00	0.08	0.00	13.75	404.5
76F 98113 00	NEVADA SPRING CREEK PARTNERS LLC	FISH AND WILDLIFE		0.54	0.00	340.00	0.0
76F 98114 00	NEVADA SPRING CREEK PARTNERS LLC	FISH AND WILDLIFE		0.56	0.00	340.00	0.0
76F 98117 00	NEVADA SPRING CREEK PARTNERS LLC	IRRIGATION	7988.64	17.80	470.00	921.20	0.0

48. The instream fish and wildlife water rights (76F 98113-00 and 76F 98114-00) do not have recorded flow rate or volume. The Montana Water Court added the remark that the flow rate and volume are limited to the minimum amount necessary to sustain this purpose. To not underestimate the historical use of these water rights for the sole purpose of this specific change application, the Department assumed 1,000,000 ducks or geese present for the entire year for each water right. The Department standard is 50 geese or ducks per 1 AU. The volume assigned to each water right was 340 AF. The flow rate was calculated as the flow rate to produce the required volume over the period of diversion. This estimation is solely for the purpose of quantifying these water rights for analysis in this change application and is not intended to quantify the historic use of those water rights.

**Table 4. Physical and Legal Water Availability Analysis for Nevada Creek in Flow Rate (CFS) and Volume (AF)**

<b>Month</b>	<b>Jan</b>	<b>Feb</b>	<b>Mar</b>	<b>Apr</b>	<b>May</b>	<b>Jun</b>	<b>Jul</b>	<b>Aug</b>	<b>Sep</b>	<b>Oct</b>	<b>Nov</b>	<b>Dec</b>
Median of the Mean Monthly Flow at the Gage (CFS)	23.8	21.3	55.9	48	71.9	81.4	30	24.3	29	23.2	24.5	23.2
Legal Demands Between the Gage and the Top of the Depleted Reach (CFS)	0.40	0.40	0.40	37.70	37.70	37.70	37.70	37.70	37.70	37.70	0.40	0.40
Physical Availability of water at the Top of the Depleted Reach (CFS)	24.20	21.70	56.30	85.70	109.60	119.10	67.70	62.00	66.70	60.90	24.90	23.60
Legal Demands Between the Top of the Depleted Reach and the Blackfoot River (CFS)	0.48	1.58	1.58	38.88	38.88	38.88	38.88	38.88	38.88	38.88	1.58	1.04
<b>Physical Availability of Water at the Top of the Depleted Reach Minus Legal Demands to the Blackfoot River (CFS)</b>	<b>23.72</b>	<b>20.12</b>	<b>54.72</b>	<b>46.82</b>	<b>70.72</b>	<b>80.22</b>	<b>28.82</b>	<b>23.12</b>	<b>27.82</b>	<b>22.02</b>	<b>23.32</b>	<b>22.56</b>
Median of the Mean Monthly Flow at the Gage (AF)	1460.8	1180.9	3431.1	2851.2	4413.2	4835.2	1841.4	1491.5	1722.6	1424.0	1455.3	1424.0
Legal Demands Between the Gage and the Top of the Depleted Reach (AF)	5.81	5.24	5.81	32.39	144.11	139.46	144.11	144.11	139.46	28.11	5.62	5.81
Physical Availability of water at the Top of the Depleted Reach (AF)	1466.7	1186.1	3437.0	2883.6	4557.3	4974.6	1985.5	1635.6	1862.1	1452.1	1460.9	1429.8
Legal Demands Between the Top of the Depleted Reach and the Blackfoot River (AF)	7.93	68.42	75.75	100.07	214.05	207.15	214.05	214.05	207.15	98.05	73.30	23.97
<b>Physical Availability of Water at the Top of the Depleted Reach Minus Legal Demands to the Blackfoot River (AF)</b>	<b>1458.7</b>	<b>1117.7</b>	<b>3361.2</b>	<b>2783.5</b>	<b>4343.3</b>	<b>4767.5</b>	<b>1771.5</b>	<b>1421.6</b>	<b>1654.9</b>	<b>1354.1</b>	<b>1387.6</b>	<b>1405.9</b>

49. Because the annual value of physically available flow and volume of water at the top of the depleted reach of Nevada Creek minus all legal demands between the top of the depleted reach and the confluence with the Blackfoot River is greater than the modelled reduction in annual return flow to Nevada Creek, and because water will be left instream on the Blackfoot River, the Department finds that the change in return flows will not create an adverse effect.

## **BENEFICIAL USE**

### **FINDINGS OF FACT**

50. Applicant proposes to use water for Irrigation. Irrigation is a recognized beneficial use under the Montana Water Use Act. § 85-2-102(5), MCA

51. Applicant proposes to use 10.53 CFS flow rate and 589.9 AF diverted volume. The flow rate is based on the capacity of the pumps and the volume is the amount calculated by the Department for 80% efficient center pivot sprinkler systems as detailed in ARM 36.12.1902. The diverted volume is within Department standards for sprinkler irrigation in climatic region V.

## **ADEQUATE DIVERSION**

### **FINDINGS OF FACT**

52. At the point of diversion in SWSWSE Section 32, T14N, R11W, authorized in the 1979 change, the Applicant proposes an 8-hp pump and a Cornell Model 5HH booster pump with a maximum capacity of 3,800 GPM. Given a 75% operating efficiency, the pumps can supply 2,850 GPM sufficient to operate three pivots. Approximately 6,500 feet of 12-inch mainline carries water to three pivots. The pivots in SW Section 32, T14N, R11W and NE Section 32, T14N, R11W are Zimmatic Standard Pivot 807. The partial pivot in NW Section 5, T13N, R11W is a Valley Precision Corner 8098.

53. At the new point of diversion in SWSWSW Section 33, T14N, R11W the Applicant proposes a Xylem Lineshaft Turbine pump capable of diverting 2,500 GPM at maximum power under ideal conditions. Given 75% operating efficiency, the pump can supply 1,875 GPM sufficient to operate the pivot. Approximately 9,850 feet of 12-inch mainline carries water to the pivot in NE Section 3, T13N, R11W. That pivot is a Valley Standard Pivot 8000.

54. All center pivot sprinkler systems are equipped with low drift sprinkler heads on drop hoses.

55. The irrigation system was designed by Aqua Tech Inc. Belgrade, MT.

## **POSSESSORY INTEREST**

### **FINDINGS OF FACT**

56. The Applicants signed the affidavit on the application form affirming the applicants have possessory interest, or the written consent of the person with the possessory interest, in the property where the water is to be put to beneficial use.

## **CONCLUSIONS OF LAW**

## HISTORIC USE AND ADVERSE EFFECT

57. Montana's change statute codifies the fundamental principles of the Prior Appropriation Doctrine. Sections 85-2-401 and -402(1)(a), MCA, authorize changes to existing water rights, permits, and water reservations subject to the fundamental tenet of Montana water law that one may change only that to which he or she has the right based upon beneficial use. A change to an existing water right may not expand the consumptive use of the underlying right or remove the well-established limit of the appropriator's right to water actually taken and beneficially used. An increase in consumptive use constitutes a new appropriation and is subject to the new water use permit requirements of the MWUA. McDonald v. State, 220 Mont. 519, 530, 722 P.2d 598, 605 (1986)(beneficial use constitutes the basis, measure, and limit of a water right); Featherman v. Hennessy, 43 Mont. 310, 316-17, 115 P. 983, 986 (1911)(increased consumption associated with expanded use of underlying right amounted to new appropriation rather than change in use); Quigley v. McIntosh, 110 Mont. 495, 103 P.2d 1067, 1072-74 (1940)(appropriator may not expand a water right through the guise of a change – expanded use constitutes a new use with a new priority date junior to intervening water uses); Allen v. Petrick, 69 Mont. 373, 222 P. 451(1924)(“quantity of water which may be claimed lawfully under a prior appropriation is limited to that quantity within the amount claimed which the appropriator has needed, and which within a reasonable time he has actually and economically applied to a beneficial use. . . . it may be said that the principle of beneficial use is the one of paramount importance . . . The appropriator does not own the water. He has a right of ownership in its use only”); Town of Manhattan, at ¶ 10 (an appropriator's right only attaches to the amount of water actually taken and beneficially applied); Town of Manhattan v. DNRC, Cause No. DV-09-872C, Montana Eighteenth Judicial District Court, *Order Re Petition for Judicial Review*, Pg. 9 (2011)(the rule that one may change only that to which it has a right is a fundamental tenet of Montana water law and imperative to MWUA change provisions); In the Matter of Application to Change a Water Right No. 41I 30002512 by Brewer Land Co, LLC, DNRC Proposal For Decision and Final Order (2004).<sup>1</sup>

58. Sections 85-2-401(1) and -402(2)(a), MCA, codify the prior appropriation principles that Montana appropriators have a vested right to maintain surface and ground water conditions substantially as they existed at the time of their appropriation; subsequent appropriators may

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<sup>1</sup> DNRC decisions are available at:

[http://www.dnrc.mt.gov/wrd/water\\_rts/hearing\\_info/hearing\\_orders/hearingorders.asp](http://www.dnrc.mt.gov/wrd/water_rts/hearing_info/hearing_orders/hearingorders.asp)  
Preliminary Determination to Grant  
Application to Change Water Right No. 76F 30155050.

insist that prior appropriators confine their use to what was actually appropriated or necessary for their originally intended purpose of use; and, an appropriator may not change or alter its use in a manner that adversely affects another water user. Spokane Ranch & Water Co. v. Beatty, 37 Mont. 342, 96 P. 727, 731 (1908); Quigley, 110 Mont. at 505-11, 103 P.2d at 1072-74; Matter of Royston, 249 Mont. at 429, 816 P.2d at 1057; Hohenlohe, at ¶¶43-45.<sup>2</sup>

59. The cornerstone of evaluating potential adverse effect to other appropriators is the determination of the “historic use” of the water right being changed. Town of Manhattan, at ¶10 (recognizing that the Department’s obligation to ensure that change will not adversely affect other water rights requires analysis of the actual historic amount, pattern, and means of water use). A change applicant must prove the extent and pattern of use for the underlying right proposed for change through evidence of the historic diverted amount, consumed amount, place of use, pattern of use, and return flow because a statement of claim, permit, or decree may not include the beneficial use information necessary to evaluate the amount of water available for change or potential for adverse effect.<sup>3</sup> A comparative analysis of the historic use of the water right to the proposed change in use is necessary to prove the change will not result in expansion of the original right, or adversely affect water users who are entitled to rely upon maintenance of conditions on the source of supply for their water rights. Quigley, 103 P.2d at 1072-75 (it is necessary to ascertain historic use of a decreed water right to determine whether a change in use expands the underlying right to the detriment of other water user because a decree only provides a limited description of the right); Royston, 249 Mont. at 431-32, 816 P.2d at 1059-60 (record could not sustain a conclusion of no adverse effect because the applicant failed to provide the Department with evidence of the historic diverted volume, consumption, and return flow); Hohenlohe, at ¶44-45; Town of Manhattan v. DNRC, Cause No. DV-09-872C, Montana

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<sup>2</sup> See also Holmstrom Land Co., Inc., v. Newlan Creek Water District, 185 Mont. 409, 605 P.2d 1060 (1979); Lokowich v. Helena, 46 Mont. 575, 129 P. 1063(1913); Thompson v. Harvey, 164 Mont. 133, 519 P.2d 963 (1974)(plaintiff could not change his diversion to a point upstream of the defendants because of the injury resulting to the defendants); McIntosh v. Graveley, 159 Mont. 72, 495 P.2d 186 (1972)(appropriator was entitled to move his point of diversion downstream, so long as he installed measuring devices to ensure that he took no more than would have been available at his original point of diversion); Head v. Hale, 38 Mont. 302, 100 P. 222 (1909)(successors of the appropriator of water appropriated for placer mining purposes cannot so change its use as to deprive lower appropriators of their rights, already acquired, in the use of it for irrigating purposes); and, Gassert v. Noyes, 18 Mont. 216, 44 P. 959(1896)(change in place of use was unlawful where reduced the amount of water in the source of supply available which was subject to plaintiff’s subsequent right).

<sup>3</sup>A claim only constitutes *prima facie* evidence for the purposes of the adjudication under § 85-2-221, MCA. The claim does not constitute *prima facie* evidence of historical use in a change proceeding under §85-2-402, MCA. For example, most water rights decreed for irrigation are not decreed with a volume and provide limited evidence of actual historic beneficial use. §85-2-234, MCA



Eighteenth Judicial District Court, *Order Re Petition for Judicial Review*, Pgs. 11-12 (proof of historic use is required even when the right has been decreed because the decreed flow rate or volume establishes the maximum appropriation that may be diverted, and may exceed the historical pattern of use, amount diverted or amount consumed through actual use); Matter of Application For Beneficial Water Use Permit By City of Bozeman, *Memorandum*, Pgs. 8-22 (Adopted by DNRC *Final Order* January 9, 1985)(evidence of historic use must be compared to the proposed change in use to give effect to the implied limitations read into every decreed right that an appropriator has no right to expand his appropriation or change his use to the detriment of juniors).<sup>4</sup>

60. An applicant must also analyze the extent to which a proposed change may alter historic return flows for purposes of establishing that the proposed change will not result in adverse effect. The requisite return flow analysis reflects the fundamental tenant of Montana water law that once water leaves the control of the original appropriator, the original appropriator has no right to its use and the water is subject to appropriation by others. *E.g.*, Hohenlohe, at ¶144; Rock Creek Ditch & Flume Co. v. Miller, 93 Mont. 248, 17 P.2d 1074, 1077 (1933); Newton v. Weiler, 87 Mont. 164, 286 P. 133(1930); Popham v. Holloron, 84 Mont. 442, 275 P. 1099, 1102 (1929); Galiger v. McNulty, 80 Mont. 339, 260 P. 401 (1927); Head v. Hale, 38 Mont. 302, 100 P. 222 (1909); Spokane Ranch & Water Co., 37 Mont. at 351-52, 96 P. at 731; Hidden Hollow Ranch v. Fields,

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<sup>4</sup> Other western states likewise rely upon the doctrine of historic use as a critical component in evaluating changes in appropriation rights for expansion and adverse effect: Pueblo West Metropolitan District v. Southeastern Colorado Water Conservancy District, 717 P.2d 955, 959 (Colo. 1986)(“[O]nce an appropriator exercises his or her privilege to change a water right ... the appropriator runs a real risk of requantification of the water right based on actual historical consumptive use. In such a change proceeding a junior water right ... which had been strictly administered throughout its existence would, in all probability, be reduced to a lesser quantity because of the relatively limited actual historic use of the right.”); Santa Fe Trail Ranches Property Owners Ass'n v. Simpson, 990 P.2d 46, 55 -57 (Colo., 1999); Farmers Reservoir and Irr. Co. v. City of Golden, 44 P.3d 241, 245 (Colo. 2002)(“We [Colorado Supreme Court] have stated time and again that the need for security and predictability in the prior appropriation system dictates that holders of vested water rights are entitled to the continuation of stream conditions as they existed at the time they first made their appropriation”); Application for Water Rights in Rio Grande County, 53 P.3d 1165, 1170 (Colo. 2002); Wyo. Stat. § 41-3-104 (When an owner of a water right wishes to change a water right ... he shall file a petition requesting permission to make such a change .... The change ... may be allowed provided that the quantity of water transferred ... shall not exceed the amount of water historically diverted under the existing use, nor increase the historic rate of diversion under the existing use, nor increase the historic amount consumptively used under the existing use, nor decrease the historic amount of return flow, nor in any manner injure other existing lawful appropriators.); Basin Elec. Power Co-op. v. State Bd. of Control, 578 P.2d 557, 564 -566 (Wyo, 1978) (a water right holder may not effect a change of use transferring more water than he had historically consumptively used; regardless of the lack of injury to other appropriators, the amount of water historically diverted under the existing use, the historic rate of diversion under the existing use, the historic amount consumptively used under the existing use, and the historic amount of return flow must be considered.)

2004 MT 153, 321 Mont. 505, 92 P.3d 1185; In the Matter of Application for Change Authorization No. G (W)028708-411 by Hedrich/Straugh/Ringer, DNRC Final Order (Dec. 13, 1991); In the Matter of Application for Change Authorization No. G(W)008323-G76l By Starkel/Koester, DNRC Final Order (Apr. 1, 1992); In the Matter of Application to Change a Water Right No. 41l 30002512 by Brewer Land Co, LLC, DNRC Proposal For Decision and Final Order (2004); Admin. R.M. 36.12.101(56)(Return flow - that part of a diverted flow which is not consumed by the appropriator and returns underground to its original source or another source of water - is not part of a water right and is subject to appropriation by subsequent water users).<sup>5</sup>

61. Although the level of analysis may vary, analysis of the extent to which a proposed change may alter the amount, location, or timing return flows is critical in order to prove that the proposed change will not adversely affect other appropriators who rely on those return flows as part of the source of supply for their water rights. Royston, 249 Mont. at 431, 816 P.2d at 1059-60; Hohenlohe, at ¶¶ 45-6 and 55-6; Spokane Ranch & Water Co., 37 Mont. at 351-52, 96 P. at 731. Noted Montana Water Law scholar Al Stone explained that the water right holder who seeks to change a water right is unlikely to receive the full amount claimed or historically used at the original place of use due to reliance upon return flows by other water users. Montana Water Law, Albert W. Stone, Pgs. 112-17 (State Bar of Montana 1994).

62. In Royston, the Montana Supreme Court confirmed that an applicant is required to prove lack of adverse effect through comparison of the proposed change to the historic use, historic consumption, and historic return flows of the original right. 249 Mont. at 431, 816 P.2d at 1059-60. More recently, the Montana Supreme Court explained the relationship between the fundamental principles of historic beneficial use, return flow, and the rights of subsequent appropriators as they relate to the adverse effect analysis in a change proceeding in the following manner:

The question of adverse effect under §§ 85-2-402(2) and -408(3), MCA, implicates return flows. A change in the amount of return flow, or to the hydrogeologic pattern of return flow, has the potential to affect adversely downstream water rights. There consequently exists an inextricable link between the “amount historically consumed” and the water that re-enters the stream as return flow. . . .  
An appropriator historically has been entitled to the greatest quantity of water he

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<sup>5</sup> The Montana Supreme Court recently recognized the fundamental nature of return flows to Montana’s water sources in addressing whether the Mitchell Slough was a perennial flowing stream, given the large amount of irrigation return flow which feeds the stream. The Court acknowledged that the Mitchell’s flows are fed by irrigation return flows available for appropriation. Bitterroot River Protective Ass’n, Inc. v. Bitterroot Conservation Dist. 2008 MT 377, ¶¶ 22, 31, 43, 346 Mont. 508, ¶¶ 22, 31,43, 198 P.3d 219, ¶¶ 22, 31,43(citing Hidden Hollow Ranch v. Fields, 2004 MT 153, 321 Mont. 505, 92 P.3d 1185).

can put to use. The requirement that the use be both beneficial and reasonable, however, proscribes this tenet. This limitation springs from a fundamental tenet of western water law-that an appropriator has a right only to that amount of water historically put to beneficial use-developed in concert with the rationale that each subsequent appropriator "is entitled to have the water flow in the same manner as when he located," and the appropriator may insist that prior appropriators do not affect adversely his rights.

This fundamental rule of Montana water law has dictated the Department's determinations in numerous prior change proceedings. The Department claims that historic consumptive use, as quantified in part by return flow analysis, represents a key element of proving historic beneficial use.

We do not dispute this interrelationship between historic consumptive use, return flow, and the amount of water to which an appropriator is entitled as limited by his past beneficial use.

Hohenlohe, at ¶¶ 42-45 (internal citations omitted).

63. The Department's rules reflect the above fundamental principles of Montana water law and are designed to itemize the type of evidence and analysis required for an applicant to meet its burden of proof. Admin.R.M. 36.12.1901 through 1903. These rules forth specific evidence and analysis required to establish the parameters of historic use of the water right being changed. Admin.R.M. 36.12.1901 and 1902. The rules also outline the analysis required to establish a lack of adverse effect based upon a comparison of historic use of the water rights being changed to the proposed use under the changed conditions along with evaluation of the potential impacts of the change on other water users caused by changes in the amount, timing, or location of historic

64. Applicant seeks to change existing water rights represented by its Water Right Claims. The "existing water rights" in this case are those as they existed prior to July 1, 1973, because with limited exception, no changes could have been made to those rights after that date without the Department's approval. Analysis of adverse effect in a change to an "existing water right" requires evaluation of what the water right looked like and how it was exercised prior to July 1, 1973. In McDonald v. State, the Montana Supreme Court explained:

The foregoing cases and many others serve to illustrate that what is preserved to owners of appropriated or decreed water rights by the provision of the 1972 Constitution is what the law has always contemplated in this state as the extent of a water right: such amount of water as, by pattern of use and means of use, the owners or their predecessors put to beneficial use. . . . the Water Use Act contemplates that all water rights, regardless of prior statements or claims as to amount, must nevertheless, to be recognized, pass the test of historical, unabandoned beneficial use. . . . To that extent only the 1972 constitutional recognition of water rights is effective and will be sustained.

220 Mont. at 529, 722 P.2d at 604; see also Matter of Clark Fork River Drainage Area, 254 Mont. 11, 17, 833 P.2d 1120 (1992).

65. Water Resources Surveys were authorized by the 1939 legislature. 1939 Mont. Laws Ch. 185, § 5. Since their completion, Water Resources Surveys have been invaluable evidence in water right disputes and have long been relied on by Montana courts. In re Adjudication of Existing Rights to Use of All Water in North End Subbasin of Bitterroot River Drainage Area in Ravalli and Missoula Counties, 295 Mont. 447, 453, 984 P.2d 151, 155 (1999)(Water Resources Survey used as evidence in adjudicating of water rights); Wareing v. Schreckendgust, 280 Mont. 196, 213, 930 P.2d 37, 47 (1996)(Water Resources Survey used as evidence in a prescriptive ditch easement case); Olsen v. McQueary, 212 Mont. 173, 180, 687 P.2d 712, 716 (1984) (judicial notice taken of Water Resources Survey in water right dispute concerning branches of a creek).

66. While evidence may be provided that a particular parcel was irrigated, the actual amount of water historically diverted and consumed is critical. E.g., In the Matter of Application to Change Water Right No. 41H 1223599 by MGRR #1, LLC., DNRC Proposal for Decision adopted by Final Order (2005). The Department cannot assume that a parcel received the full duty of water or that it received sufficient water to constitute full-service irrigation for optimum plant growth. Even when it seems clear that no other rights could be affected solely by a particular change in the location of diversion, it is essential that the change also not enlarge an existing right. See MacDonald, 220 Mont. at 529, 722 P.2d at 604; Featherman, 43 Mont. at 316-17, 115 P. at 986; Trail's End Ranch, L.L.C. v. Colorado Div. of Water Resources 91 P.3d 1058, 1063 (Colo., 2004).

67. The Department has adopted a rule providing for the calculation of historic consumptive use where the applicant proves by a preponderance of the evidence that the acreage was historically irrigated. Admin. R. M. 36.12.1902 (16). In the alternative an applicant may present its own evidence of historic beneficial use. In this case Applicant has elected to proceed under Admin. R.M. 36.12.1902. (FOF 20).

68. If an applicant seeks more than the historic consumptive use as calculated by Admin.R.M .36.12.1902 (16), the applicant bears the burden of proof to demonstrate the amount of historic consumptive use by a preponderance of the evidence. The actual historic use of water could be less than the optimum utilization represented by the calculated duty of water in any particular case. E.g., Application for Water Rights in Rio Grande County 53 P.3d 1165 (Colo., 2002) (historical use must be quantified to ensure no enlargement); In the Matter of Application to

Change Water Right No. 41H 1223599 by MGRR #1, LLC., supra; Orr v. Arapahoe Water and Sanitation Dist. 753 P.2d 1217, 1223 -1224 (Colo., 1988)(historical use of a water right could very well be less than the duty of water); Weibert v. Rothe Bros., Inc., 200 Colo. 310, 317, 618 P.2d 1367, 1371 - 1372 (Colo. 1980) (historical use could be less than the optimum utilization “duty of water”).

69. Based upon the Applicant’s evidence of historic use, the Applicant has proven by a preponderance of the evidence the historic use of Water Right Claim No. 76F 110716-00 of 22.73 CFS flow rate and 765.42 AF diverted volume with a consumptive use of 259.9 AF. Based upon the Applicant’s evidence of historic use, the Applicant has proven by a preponderance of the evidence the historic use of Water Right Claim No. 76F 1107122-00 of 22.73 CFS flow rate and 765.42 AF diverted volume with a consumptive use of 259.9 AF. (FOF 9 - 33)

70. Based upon the Applicant’s comparative analysis of historic water use and return flows to water use and return flows under the proposed change, the Applicant has proven that the proposed change in appropriation right will not adversely affect the use of the existing water rights of other persons or other perfected or planned uses or developments for which a permit or certificate has been issued or for which a state water reservation has been issued. §85-2-402(2)(b), MCA. (FOF 34 - 49)

### BENEFICIAL USE

71. A change applicant must prove by a preponderance of the evidence the proposed use is a beneficial use. §§85-2-102(4) and -402(2)(c), MCA. Beneficial use is and has always been the hallmark of a valid Montana water right: “[T]he amount actually needed for beneficial use within the appropriation will be the basis, measure, and the limit of all water rights in Montana . . .” McDonald, 220 Mont. at 532, 722 P.2d at 606. The analysis of the beneficial use criterion is the same for change authorizations under §85-2-402, MCA, and new beneficial permits under §85-2-311, MCA. Admin.R.M. 36.12.1801. The amount of water that may be authorized for change is limited to the amount of water necessary to sustain the beneficial use. E.g., Bitterroot River Protective Association v. Siebel, *Order on Petition for Judicial Review*, Cause No. BDV-2002-519, Montana First Judicial District Court (2003) (*affirmed on other grounds*, 2005 MT 60, 326 Mont. 241, 108 P.3d 518); Worden v. Alexander, 108 Mont. 208, 90 P.2d 160 (1939); Allen v. Petrick, 69 Mont. 373, 222 P. 451(1924); Sitz Ranch v. DNRC, DV-10-13390, Montana Fifth Judicial

District Court, *Order Affirming DNRC Decision*, Pg. 3 (2011)(citing BRPA v. Siebel, 2005 MT 60, and rejecting applicant's argument that it be allowed to appropriate 800 acre-feet when a typical year would require 200-300 acre-feet); Toohy v. Campbell, 24 Mont. 13, 60 P. 396 (1900)("The policy of the law is to prevent a person from acquiring exclusive control of a stream, or any part thereof, not for present and actual beneficial use, but for mere future speculative profit or advantage, without regard to existing or contemplated beneficial uses. He is restricted in the amount that he can appropriate to the quantity needed for such beneficial purposes."); §85-2-312(1)(a), MCA (DNRC is statutorily prohibited from issuing a permit for more water than can be beneficially used).

72. Applicant proposes to use water for irrigation which is a recognized beneficial use. §85-2-102(5), MCA. Applicant has proven by a preponderance of the evidence irrigation is a beneficial use and that 10.53 CFS flow rate and 589.9 AF of diverted volume requested is the amount needed to sustain the beneficial use §85-2-402(2)(c), MCA (FOF 50 - 51)

#### ADEQUATE MEANS OF DIVERSION

73. Pursuant to §85-2-402 (2)(b), MCA, the Applicant must prove by a preponderance of the evidence that the proposed means of diversion, construction, and operation of the appropriation works are adequate. This codifies the prior appropriation principle that the means of diversion must be reasonably effective for the contemplated use and may not result in a waste of the resource. Crowley v. 6<sup>th</sup> Judicial District Court, 108 Mont. 89, 88 P.2d 23 (1939); In the Matter of Application for Beneficial Water Use Permit No. 41C-11339900 by Three Creeks Ranch of Wyoming LLC (DNRC Final Order 2002)(information needed to prove that proposed means of diversion, construction, and operation of the appropriation works are adequate varies based upon project complexity; design by licensed engineer adequate).

74. Pursuant to §85-2-402 (2)(b), MCA, Applicant has proven by a preponderance of the evidence that the proposed means of diversion, construction, and operation of the appropriation works are adequate for the proposed beneficial use. (FOF 52 - 55)

#### POSSESSORY INTEREST

75. Pursuant to §85-2-402(2)(d), MCA, the Applicant must prove by a preponderance of the evidence that it has a possessory interest, or the written consent of the person with the possessory interest, in the property where the water is to be put to beneficial use. See also Admin.R.M. 36.12.1802

76. The Applicant has proven by a preponderance of the evidence that it has a possessory interest, or the written consent of the person with the possessory interest, in the property where the water is to be put to beneficial use. (FOF 56)

### **PRELIMINARY DETERMINATION**

Subject to the terms and analysis in this Preliminary Determination Order, the Department preliminarily determines that this Application to Change Water Right No. 76F 30155050 should be granted subject to the following.

The Applicant may change Statements of Claim 76F 110722-00 and 76F 110716-00 by changing the point of diversion to two pumps in the Blackfoot River in SWSWSE Section 32, T14N, R11W, and SWSWSW Section 33, T14N, R11W, both in Powell County. The Applicant may change the place of use to four center pivot sprinkler systems covering 101.00 AC in NW Section 5 and 150.00 AC in Section 3, T13N, R11W, 114.00 AC in NE and 133.00 AC in SW Section 32, T14N, R11W, all in Powell County.

The application will be subject to the following conditions, limitations, or restrictions.

THE APPROPRIATOR WILL CEASE DIVERSION AND USE OF WATER FOR IRRIGATION ON 150 AC IN SECTION 3, T13N, R11W AND 114 AC IN NE SECTION 32, T14N, R11W, WHEN FLOW IN THE BLACKFOOT RIVER MEASURED NEAR BONNER, MT, FALLS BELOW 700 CFS.

### **NOTICE**

This Department will provide public notice of this Application and the Department's Preliminary Determination to Grant pursuant to §85-2-307, MCA. The Department will set a deadline for objections to this Application pursuant to §§85-2-307, and -308, MCA. If this



Application receives a valid objection, it will proceed to a contested case proceeding pursuant to Title 2 Chapter 4 Part 6, MCA, and §85-2-309, MCA. If this Application receives no valid objection or all valid objections are unconditionally withdrawn, the Department will grant this Application as herein approved. If this Application receives a valid objection(s) and the valid objection(s) are conditionally withdrawn, the Department will consider the proposed condition(s) and grant the Application with such conditions as the Department decides necessary to satisfy the applicable criteria. E.g., §§85-2-310, -312, MCA.

DATED this 13<sup>th</sup> day of December 2022.

/Original signed by Mark Elison/  
Mark Elison, Manager  
Billings Regional Office  
Department of Natural Resources  
and Conservation

**CERTIFICATE OF SERVICE**

This certifies that a true and correct copy of the PRELIMINARY DETERMINATION TO GRANT was served upon all parties listed below on this \_\_\_\_ day of \_\_\_\_\_ 20\_\_, by first class United States mail.

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